

Notice of Allowability

Application No.

10/688,076

Examiner

Anthony Quash

Applicant(s)

SIMMONS ET AL.

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2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed, 5/8/06.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date <u>7/5/05</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

Claims 1-36 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance: With respect to independent claim 1, the prior art of record does not explicitly disclose nor teach an ion implanter electrode component comprising, an electrically conductive insert member which is inserted into the ion implanter support frame installed which is installed in the ion implanter, the insert member comprising an electrode body portion defining an aperture, the insert member further comprising a plurality of alignment pins positioned to engage the support frame, and wherein the insert member comprises a plurality of retention flanges that engage the frame and retain the electrode body portion in aligned position within the ion implanter support frame and electrically coupled to the support frame during the ion beam generation, in combination with the remaining aspects of the claim. Since this aspect is neither explicitly disclosed nor taught in the prior art of record, independent claim 1, and dependent claims 2-5 which also incorporate this aspect are deemed allowable over the prior art of record.

With respect to independent claims 6,24, the prior art of record does not explicitly disclose nor teach an ion implanter electrode, comprising an electrically conductive insert member adapted to be inserted into the ion implanter support frame, the insert member further comprising a first alignment pin positioned to engage the ion implanter

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support frame groove-shaped first alignment surface, and a second alignment pin positioned to engage the ion implanter support frame second alignment surface to align the aperture in an aligned position relative to the ion implanter support frame, in combination with the remaining aspects of the claim. Since this aspect is neither explicitly disclosed nor taught in the prior art of record, independent claims 6,24, and dependent claims 7-11,24-29, which also incorporate this aspect are deemed allowable over the prior art of record.

With respect to independent claims 12,30, the prior art of record does not explicitly disclose a method of assembling an ion implanter electrode, the method comprising inserting an electrically conductive insert member into an electrically conductive electrode support frame which defines an aperture having first and second alignment surfaces, wherein the first alignment surface is groove-shaped, and wherein the insert member comprises an electrode body portion defining an aperture, and engaging a first alignment pin of the insert member with the ion implanter support frame groove-shaped first alignment surface, engaging a second alignment pin of the insert member with the ion implanter support frame second alignment surface to align the insert member aperture in an aligned position relative to the ion implanter support frame, wherein the electrode body portion is positioned to receive the ion beam passing through the aperture, and engaging a plurality of retention flanges of the insert member with the ion implanter support frame to retain the electrode body portion in the aligned position, in combination with the remaining aspects of the claims. Since this aspect is neither explicitly disclosed nor taught in the prior art of record, independents claim 12,

30, and dependent claims 13-17,31-35, which also incorporate this aspect are deemed allowable over the prior art of record.

With respect to independent claim 18, the prior art of record does not explicitly disclose nor teach an ion extraction electrode component comprising a one-piece electrically conductive insert member adapted to be inserted into the ion implanter support frame, the insert member further comprising a plurality of alignment pins, wherein each alignment pin has a cylindrical pin body portion and a retention cap having a width wider than the width of pin body portion, and wherein the support frame has a flat face and the insert member has a flat face portion, and wherein the insert member flat face portion is positioned engaged face to face with the support frame flat face portion in the aligned and retained position, in combination with the remaining aspects of the claim.

With respect to independent claim 19, the prior art of record does not explicitly disclose nor teach, an ion implanter electrode component, comprising an electrically conductive insert member adapted to be inserted into the ion implanter support frame installed in the ion implanter, the insert member comprising an electrode body portion defining an aperture, the insert member defining a plurality of alignment slots each aligned slot having a base surface which defines an alignment surface adapted to be engaged by a support frame alignment pin to align the insert member aperture in an aligned position relative to the ion implanter support frame wherein the electrode body portion is positioned to receive the ion beam passing through the insert member aperture, the insert member further comprising a plurality of retention surfaces, each

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retention surface being adapted to be engaged by the ion implanter support frame retention flanges to retain the electrode body portion in the aligned position within the ion implanter frame and electrically coupled to the support frame during the ion beam generation, in combination with the remaining aspects of the claims. Since this aspect is neither explicitly disclosed nor taught in the prior art of record, independent claim 19, and dependent claims 20-23 which also incorporate this aspect are deemed allowable over the prior art of record.

With respect to independent claim 36, the prior art of record does not explicitly disclose nor teach an ion extraction electrode component comprising a one-piece electrically conductive insert member adapted to be inserted into the ion implanter support frame installed in the ion implanter, the insert member comprising an integral electrode body portion defining an aperture, the insert member further defining a plurality of rectangular alignment slots, each alignment slot having a base surface which defines an alignment surface adapted to be engaged by a support frame alignment pin to align the insert member aperture in an aligned position relative to the ion implanter support frame during the ion beam generation, wherein one base alignment surface is groove-shaped, in combination with the remaining aspects of the claim.

In addition, applicant's arguments see amendment, filed 5/8/06, with respect to claims 1-36 have been fully considered and are persuasive.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Quash whose telephone number is (571)-272-2480. The examiner can normally be reached on Monday thru Friday 9 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571)-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A. Quash

AQ
8/3/06

Nikita Wells

NIKITA WELLS
PRIMARY EXAMINER

08/07/06